

corresponding shift in flat band magnitude may be obtained by replacing the gate region 510 material or by changing the dopant levels in the substrate 502 and channel area 508.

#### IN THE CLAIMS

An election to prosecute the claims of Group I, namely claims 1 through 7 and 15 through 19, has been made. The claims of Group II, namely claims 8 through 14, are withdrawn without prejudice at the present time.

Presented below are all of the non-withdrawn pending claims in a clean, un-marked format. Claims that have not been amended are included with the notation "Unamended".

- 1        1.    (Unamended) An apparatus, comprising:  
2        a metal-oxide-semiconductor transistor with a shifted flat band  
3                magnitude;  
4        a gate electrode coupled to said metal-oxide-semiconductor  
5                transistor and to a positive voltage source; and  
6        a source electrode, a drain electrode, and a substrate electrode  
7                coupled to each other and to a negative voltage  
8                source.

50  
32  
A

1            2.    (Once amended) The apparatus of claim 1, wherein said  
2 metal-oxide-semiconductor includes a gate region material with a work  
3 function less than  $-0.56$  volts.

1            3.    (Once amended) The apparatus of claim 2, wherein said  
2 gate region material is platinum silicate.

1            4.    (Once amended) The apparatus of claim 2, wherein said  
2 gate region material is selected from the group consisting of tantalum  
3 nitrate, iridium, nickel, and arsenic.

1            5.    (Unamended) The apparatus of claim 1, wherein said  
2 metal-oxide-semiconductor transistor includes a heavily-doped  
3 substrate area.

1            6.    (Unamended) The apparatus of claim 1, wherein said  
2 metal-oxide-semiconductor transistor is a p-channel device.

1            7.    (Unamended) The apparatus of claim 1, wherein said  
2 metal-oxide-transistor is an n-channel device.

1        15. (Unamended) An apparatus, comprising:  
2        means for shifting a flat band magnitude in a metal-oxide-  
3                semiconductor transistor;  
4        means for coupling a gate electrode of said metal-oxide-  
5                semiconductor transistor to a positive voltage source;  
6                and  
7        means for coupling a source electrode, a drain electrode, and a  
8                substrate electrode of said metal-oxide-  
9                semiconductor transistor to a negative voltage  
10               source.

500  
P2 BX  
1        16. (Once amended) The apparatus of claim 15, wherein said  
2        means for shifting includes a gate region with a material whose work  
3        function is less than - 0.56 volts.

1        17. (Unamended) The apparatus of claim 16, wherein said  
2        material is platinum silicate.

1        18. (Unamended) The apparatus of claim 16, wherein said  
2        material is selected from the group consisting of tantalum nitrate,  
3        iridium, nickel, and arsenic.

1        19. (Unamended) The apparatus of claim 15, wherein said  
2        means for shifting includes a substrate which is heavily-doped.